
Safety Data Sheet (SDS) - Denatured Ethanol

According to Regulation (EC) No. 1907/2006

Material Number:	eth1
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SECTION 1: Identification of the substance/mixture and of the company

1.1. Product identifier

Denatured Ethanol

Other Trade Names: Article 106

REACH Registration Number:	01-2119457610-43-XXXX
CAS No.:	64-17-5
Index No.:	603-002-00-5
EC No.:	200-578-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

- **Use of the substance/mixture:** Thinner for use according to technical information.
- **Uses advised against:** None known when used as intended.

1.3. Details of the supplier providing the safety data sheet

Company name:	Gitaarbouwwinkel
Street:	Christiaan Huygensstraat 38
Place:	3291 CN Strijen

Telephone:	+31(0)6-51239910
E-mail:	info@gitaarbouwwinkel.nl
Contact person:	Ramon Riemersma
Internet:	www.gitaarbouwwinkel.nl

1.4. Emergency telephone number:

+31(0)6-51239910

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP)

- **Hazard categories:** Flammable liquids: Flam. Liq. 2
- **Hazard statements:** Highly flammable liquid and vapor.

2.2. Label elements

Regulation (EC) No. 1272/2008 (CLP)

- **Signal word:** Danger
- **Pictograms:** (GHS02 - Flame pictogram implied by classification)

Hazard Statements	
H225	Highly flammable liquid and vapor.

Safety Precautions	
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P241	Use explosion-proof electrical equipment.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

- **Chemical characterization:** Organic thinner
- **Sum formula:** C₂H₆O₆
- **Molar mass:** 46.07%

Hazardous ingredients

CAS No.	Designation	Content	Classification according to Regulation (EC) No. 1272/2008 [CLP]
67-63-0	2-Propanol; Isopropyl alcohol; Isopropanol	<2.5%	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336
78-93-3	Butanone; Ethyl methyl ketone	<2.5%	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066
3734-33-6	Bitrex	<2.5%	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H302 H315 H319 H335

- **Wording of H and EUH statements:** see Section 16.

SECTION 4: First-aid measures

4.1. Description of first-aid measures

- **General advice:** In all cases of doubt or when symptoms persist, seek medical advice.

Never give anything by mouth to an unconscious person or a person convulsing. If unconscious, place in the recovery position and seek medical advice.

- **After inhalation:** Move affected person to fresh air and keep them warm and calm. If breathing is difficult or stopped, start artificial respiration.
- **After skin contact:** Immediately remove contaminated clothing. Immediately wash with plenty of water and soap upon contact with skin. Do not wash with: Solvents/thinners.
- **After eye contact:** Immediately rinse with running water for 10 to 15 minutes with eyelids open and consult an eye specialist. Remove any contact lenses if possible; continue rinsing. Immediately seek medical advice.
- **After ingestion:** Rinse mouth with water if swallowed (only if the person is conscious). Immediately call a doctor. Keep the affected person calm, cover them, and keep them warm. Do not induce vomiting.

4.2. Most important acute and delayed symptoms and effects

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment. No further information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- **Suitable extinguishing media:** Alcohol-resistant foam, carbon dioxide (CO₂), extinguishing powder, water mist.
- **Unsuitable extinguishing media:** Water jet.

5.2. Special hazards arising from the substance or mixture

- Intense smoke development upon combustion.
- **Hazardous decomposition products:** Soot. Risk of serious health damage upon prolonged exposure.
- Use suitable respiratory protection.

5.3. Advice for firefighters

- Use water spray to protect personnel and cool containers in the danger area.
 - Collect contaminated extinguishing water separately. Do not allow entry into drains or waterways.
 - **Additional notes:** Notify relevant authorities in case of entry into water or sewage systems.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Keep away from ignition sources - No smoking. Ventilate the affected area.
- Avoid inhaling dust/fume/gas/mist/vapour/aerosol.
- **Safe handling:** see Section 7.
- **Personal protective equipment:** see Section 8.

6.2. Environmental precautions

- Do not allow entry into drains or waterways.
- Notify relevant authorities in case of entry into water, soil, or sewage systems.

6.3. Methods and material for containment and cleaning up

- Prevent spread over an area (e.g., by containment or oil booms). Absorb with liquid-binding material (sand, diatomaceous earth, acid binder, universal binder).
- Collect in suitable, closed containers and bring for disposal. **Disposal:** see Section 13.
- Clean with detergents. Avoid solvents.

6.4. Reference to other sections

- **Safe handling:** see Section 7
 - **Personal protective equipment:** see Section 8
 - **Disposal:** see Section 13
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- **Advice on safe handling:** The formation of explosive/highly flammable mixtures is possible with insufficient ventilation and/or through use. Only use the material in locations where open lights, fire, and other ignition sources are kept away.
 - Use explosion-proof electrical equipment.
 - **Decanting and transfer:** Take measures against electrostatic charges. Provide earthing of containers, apparatus, pumps, and extraction equipment.
 - Wear antistatic shoes and work clothing.
 - Only use antistatic (non-sparking) tools.
 - Avoid contact with skin, eyes, and clothing. Avoid: Inhalation of vapors or mist/aerosols, inhalation of dusts/particles.
 - Do not eat, drink, or smoke when working.
 - Keep away from heat sources (e.g., hot surfaces), sparks, and open flames.
 - Do not empty container under pressure. Store/keep only in original container.
 - Do not allow entry into drains or waterways.
- **Advice on fire and explosion protection:** Solvent vapors are heavier than air, spread along the ground, and form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities

- **Requirements for storage rooms and vessels:** Store according to: German Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung (BetrSichV)).
- **Hints on joint storage:** Do not store together with: Oxidizing agents, strong acids, strong alkalis.
- **Further information on storage conditions:** Observe instructions for use on the label. Storage temperature from 5°C to 20°C . Keep container tightly closed and store in a cool, well-ventilated place. Protect from sunlight. Keep away from ignition sources - No smoking. Store in a place accessible only to authorized persons. Always seal container tightly after product removal.
- **Storage class according to TRGS 510:** 3 (Flammable liquids)

7.3. Specific end use(s)

According to the manufacturer's technical information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits (TRGS 900)

CAS-No.	Designation	ppm	mg/m3	Peak Limitation	Type
78-93-3	Butanone	200	600	\$1(I)\$	-
64-17-5	Ethanol	500	960	\$2(II)\$	-
67-63-0	Propan-2-ol	200	500	2(II)	-

Biological limits (TRGS 903)

CAS-No.	Designation	Parameter	Limit Value	Analysis Material	Sampling Time
78-93-3	2-Butanone (Methyl ethyl ketone)	2-Butanone	\$2~\text{mg/l}\$	U	b
67-63-0	Propan-2-ol	Acetone	\$25~\text{mg/l}\$	U	b

DNEL-/DMEL values

CAS-No.	Designation	DNEL Type	Exposure Route	Effect	Value
64-17-5	Ethanol (cf. Ethyl alcohol)	Worker DNEL, acute	Inhalation	Systemic	1900 mg/m ³
		Worker DNEL, long-term	Dermal	Systemic	343 mg/ KG/d
		Worker DNEL, long-term	Inhalation	Systemic	950 mg/m ³
67-63-0	2-Propanol; Isopropyl alcohol; Isopropanol	Worker DNEL, long-term	Dermal	Systemic	888 mg/kg KG/d
		Worker DNEL, long-term	Inhalation	Systemic	888 mg/kg KG/d
78-93-3	Butanone; Ethyl methyl ketone	Worker DNEL, long-term	Dermal	Systemic	1161 mg/kg KG/d

		Worker DNEL, long-term	Inhalation	Systemic	600 mg/m ³
		Consumer DNEL, long-term	Oral	Systemic	31 mg/kg KG/d
		Consumer DNEL, long-term	Dermal	Systemic	412 mg/kg KG/d
		Consumer DNEL, long-term	Inhalation	Systemic	106 mg/m ³ d

PNEC Values

CAS-No.	Designation	Environmental Compartment	Value
67-63-0	2-Propanol; Isopropyl alcohol; Isopropanol	Freshwater	106 mg/m ³
		Marine water	106 mg/m ³
		Freshwater sediment	106 mg/m ³
		Marine sediment	106 mg/m ³
		Microorganisms in sewage treatment plants	106 mg/m ³
		Soil	106 mg/m ³
78-93-3	Butanone; Ethyl methyl ketone	Freshwater	55,8 mg/l
		Marine water	55,8 mg/l
		Freshwater sediment	285 mg/l
		Microorganisms in sewage treatment plants	709 mg/l
		Soil	22,5 mg/l
		Air	55,8 mg/l

8.2. Exposure controls

- **Appropriate engineering controls:** Ensure adequate ventilation. If handling openly, local exhaust ventilation devices should be used if possible. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be

worn.

- **Protective and hygiene measures:** Suitable assessment methods for checking the effectiveness of protective measures taken include measuring and non-measuring determination methods as described in the Technical Rules for Hazardous Substances (TRGS 402).
 - **Eye/face protection:** Wear safety glasses/face shield. For example, safety glasses with side protection according to EN 166: 2001.
 - **Hand protection:** Wear suitable protective gloves. Replace when worn! Chemical protective gloves must be selected specifically for the workplace, depending on the concentration and quantity of the hazardous substance. It is recommended to check the chemical resistance of the above-mentioned protective gloves for specific applications with the glove manufacturer. Observe the manufacturer's instructions.
Suitable material: E.g., Nitrile. **Penetration time (maximum wearing time):** Ask the manufacturer. CEN Standards EN420 and EN374 provide information on general requirements and the different glove types. Apply a skin protection cream before handling the product.
 - **Body protection:** Wear antistatic shoes and work clothing. (Natural fiber (e.g., cotton) / heat-resistant synthetic fiber).
 - **Respiratory protection:** Respiratory protection is required if: the limit value is exceeded. Use a suitable respiratory protection device. The European Commission for Standardization (CEN) Standards EN 136, 140, and 405 provide recommendations for respiratory masks, and Standards EN 149 and 143 provide recommendations for respiratory air filters.
 - **Environmental exposure controls:** Do not allow entry into drains or waterways.
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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- **Physical state:** liquid
- **Color:** colorless
- **Odor:** characteristic
- **pH value 10g/l, 20 °C**
- **Changes in state:**
 - **Melting point:** -114 °C
 - **Boiling point and boiling range:** 78 °C
 - **Sublimation temperature:** not applicable
 - **Softening point:** not applicable
 - **Pour point:** not applicable
 - **Flash point:** 12 °C closed cup

- **Sustained combustibility:** No self-sustaining combustion
- **Flammability:**
 - **Solid:** not applicable
 - **Gas:** not applicable
- **Explosion hazards:** The product is not explosive, but the formation of explosive vapor/air mixtures is possible.
 - **Lower explosion limit (LEL):** 3.5 Vol.-%
 - **Upper explosion limit (UEL):** 15 Vol.-%
- **Ignition temperature:** 400 °C
- **Self-ignition temperature:**
 - **Solid:** not applicable
 - **Gas:** not applicable
- **Oxidizing properties:** No information available.
- **Vapor pressure (at 20 °C):** 58 hPa
- **Density (at 20 °C):** 0,79 g/cm³ DIN 53217
- **Solubility in other solvents:** not determined
- **Efflux time (at 23 °C):** approx. 10s 4 DIN EN ISO 2431
- **Solvent separation test:** not applicable
- **Solvent content:** 100.00%

9.2. Other information

- **Solid content:** 0%
- Further information can be found in the technical data sheet.

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors can form an explosive mixture with air.

10.2. Chemical stability

The product is stable when stored at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No hazardous reactions are expected when used as intended.

10.4. Conditions to avoid

When heated: formation of hazardous decomposition products.

10.5. Incompatible materials

Keep away from strong acidic and alkaline materials as well as oxidizing agents to avoid exothermic reactions.

10.6. Hazardous decomposition products

Nitrogen oxides (NO_x), soot, carbon dioxide (CO_2), carbon monoxide. Under fire conditions, the formation of other toxic substances cannot be ruled out.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

- **Toxicokinetics, metabolism and distribution:** No data available for the product.

Acute toxicity

CAS-No.	Designation	Exposure Route	Dose	Species	Source	Method
3734-33-6	Bitrex	Oral	ATE 500 mg/kg	500	-	-

- **Practical experience:**
 - **Observations relevant to classification:**
 - **After inhalation:** Possible harmful effects on humans and possible symptoms: Can irritate the respiratory tract. Can cause liver damage upon inhalation. Can cause kidney damage upon inhalation. Central nervous system depression. Symptoms: Headache, dizziness, drowsiness, unconsciousness.
 - **After eye contact:** Irritates the eyes (reversible).
 - **After ingestion:** Symptoms: Nausea, vomiting, gastrointestinal discomfort.
 - **After skin contact:** Risk of skin absorption. Repeated or prolonged exposure can cause skin irritation and dermatitis due to the defatting

properties of the product.

- **General remarks:** No data are available for the mixture. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

Reference to other sections: 2, 3.

SECTION 12: Ecological information

12.1. Toxicity

No data are available for the product.

CAS-No.	Designation	Aquatic Toxicity	Dose	[h] [d]	Species	Source	Method
67-63-0	2-Propanol; Isopropyl alcohol; Isopropanol	Acute Fish Toxicity	LC50 1400 mg/l	96h	Bluegill sunfish (<i>Lepomis macrochirus</i>)	-	-
		Acute Crustacea Toxicity	EC50 >13000 mg/l	48h	<i>Daphnia magna</i>	-	-
78-93-3	Butanone; Ethyl methyl ketone	Acute Fish Toxicity	LC50 2990 mg/l	96h	<i>Pimephales promelas</i>	-	-
		Acute Algae Toxicity	ErC50 1972 mg/l	72h	<i>Pseudokirchneriella subcapitata</i>	-	-
		Acute Crustacea Toxicity	EC50 308 mg/l	48h	<i>Daphnia magna</i>	-	-

12.2. Persistence and degradability

No data are available for the product.

12.3. Bioaccumulative potential

No data are available for the product.

12.4. Mobility in soil

No data are available for the product.

12.5. Results of PBT and vPvB assessment

Based on the available information, the criteria for classification as PBT or vPvB are not met.

12.6. Other adverse effects

No data are available for the product.

- **Further notes:** No data are available for the mixture. Do not allow entry into drains or waterways.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- **Recommendation:** Do not allow entry into drains or waterways. Dispose of in compliance with official regulations.
 - **Waste code product:** 140603. WASTES FROM ORGANIC SOLVENTS, COOLANTS AND PROPELLANTS (EXCEPT 07 AND 08); Wastes from organic solvents, coolants and foam/aerosol propellants; other solvents and solvent mixtures; hazardous waste.
 - **Waste code uncleaned packaging:** 150110. PACKAGING WASTE, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; Packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste.
 - **Disposal of uncleaned packaging and recommended cleaning agents:** Completely emptied packaging can be recycled. Dispose of in compliance with official regulations.
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SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1170
14.2. Proper UN shipping name:	ETHANOL, SOLUTION (ETHYL ALCOHOL, SOLUTION)
14.3. Transport hazard classes:	3
14.4. Packaging group:	II
Hazard label:	3
Classification code:	F1
Special provisions:	144 601
Limited quantity (LQ):	5 L
Excepted quantity:	E2
Transport category:	2
Hazard number:	33
Tunnel restriction code:	D/E

Inland waterway transport (ADN)

14.1. UN number:	UN 1170
14.2. Proper UN shipping name:	ETHANOL, SOLUTION (ETHYL ALCOHOL, SOLUTION)
14.3. Transport hazard classes:	3
14.4. Packaging group:	II
Hazard label:	3
Classification code:	F1
Special provisions:	144 601
Limited quantity (LQ):	5 L
Excepted quantity:	E2

Sea transport (IMDG)

14.1. UN number:	UN 1170
14.2. Proper UN shipping name:	ETHANOL, SOLUTION (ETHYL ALCOHOL, SOLUTION)
14.3. Transport hazard classes:	3
14.4. Packaging group:	II
Hazard label:	3
Special provisions:	144, 223
Limited quantity (LQ):	5 L
Excepted quantity:	E2
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1170
14.2. Proper UN shipping name:	ETHANOL (ETHYL ALCOHOL)
14.3. Transport hazard classes:	3
14.4. Packaging group:	II
Hazard label:	3
Special provisions:	A3 A58 A180
Limited quantity (LQ) Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA Packing Instruction - Passenger:	353
IATA Maximum Quantity - Passenger:	5 L
IATA Packing Instruction - Cargo:	364
IATA Maximum Quantity - Cargo:	60 L

- 14.5. Environmental hazards: ENVIRONMENTAL HAZARD: no
- 14.6. Special precautions for user: No information available.
- 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code: not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/specific legislation for the substance or mixture

- **EU Regulations:**
 - **Restrictions on use (REACH, Annex XVII):** Entry 3: Ethanol (cf. Ethyl alcohol).
 - **Information on the Industrial Emissions Directive 2010/75/EU (VOC):** 100%.
 - **Information on the VOC Directive 2004/42/EC:** 100%.
- **National Regulations:**
 - Observe employment restrictions for young people (§ 22 German Youth Employment Protection Act (JArbSchG)).
 - Observe employment restrictions for expectant and nursing mothers (§§ 11 and 12 German Maternity Protection Act (MuSchG)).
 - **Water hazard class (WGK):** 1 - slightly hazardous to water.
 - **Identification number according to the catalogue of water hazardous substances:** 96.
 - **Additional notes:** National legal regulations must be observed in addition!

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for this substance.

SECTION 16: Other information

- **Classification of mixtures and evaluation method used according to Regulation (EC) No. 1272/2008 [CLP]:**
 - **Classification Procedure:** Based on test data.
 - **Classification:** Flam. Liq. 2; H225.
- **Wording of H and EUH statements (number and full text):**
 - **H225:** Highly flammable liquid and vapor.
 - **H302:** Harmful if swallowed.
 - **H315:** Causes skin irritation.
 - **H319:** Causes serious eye irritation.
 - **H335:** May cause respiratory irritation.
 - **H336:** May cause drowsiness or dizziness.
 - **EUH066:** Repeated exposure may cause skin dryness or cracking.
- The information in this Safety Data Sheet corresponds to the best of our knowledge at the time of printing.
- The information is intended to provide guidance for the safe handling of the product named in this Safety Data Sheet with regard to storage, processing, transport, and

disposal.

- The information is not transferable to other products. Insofar as the product is mixed, blended, or processed with other materials, or subjected to processing, the information in this Safety Data Sheet cannot be transferred to the new material produced in this way, unless this is explicitly stated otherwise.
- **Further information:** (The data of the hazardous ingredients were taken from the latest Safety Data Sheet of the upstream supplier).